MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

TSE2251/TIS2211 -SYSTEMS ANALYSIS AND DESIGN

(All sections / Groups)

13 OCTOBER 2017
3PM-5PM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages including this cover page.
2. This Question paper contains **SIX** questions of **10** marks each. Answer any **FIVE** questions.
3. The distribution of marks for each question is given.
4. Write all your answers in the Answer Booklet provided.

Question 1

(a) Explain THREE problems associated with system development life cycle approach. (3 marks)

(b) List any THREE important characteristics of eXtreme programming. (3 marks)

(c) Compare and contrast transaction processing systems with management information systems. (4 marks)

Question 2

(a) List any SIX activities performed by a manager during the project planning phase. (3 marks)

(b) Assume that you have a project with 10 activities labeled 1-10. The time taken for each activity and the predecessors are shown in the following table.

Activity	Time (weeks)	Immediate Predecessors
1- collect requirements	1	-
2- analyze processes	5	1
3- analyze data	4	2
4- design processes	4	2
5- design data	8	1,3
6- design screens	3	3,4,5
7- design reports	7	5,6
8- program	6	7
9- test and document	5	6,7
10- install	4	7,8,9

i. Draw the network diagram. (2 marks)

ii. Calculate Earliest completion time (T_E) and Late completion time (T_L) for each activity. (4 marks)

iii. List the activities which are on the critical path. (1 mark)

Continue...

Question 3

(a) What is Information systems planning? Give four advantages of Top-Down planning approach. (3 marks)

(b) Explain the term 'Value chain analysis'. For what purpose this is used? (3 marks)

(c) Assuming that an information system has a benefit of RM50,000 per year, a discount rate of 12% and a three-year time horizon, calculate the Net Present Value (NPV) of all benefits. (4 marks)

Question 4

(a) What is Joint Application Design (JAD)? How does group support system help in conducting JAD? (3 marks)

(b) Describe the rule to be followed with respect to (i) process (ii) data store and (iii) external entity when constructing a data flow diagram(DFD). (3 marks)

(c) Consider a typical video-rental system which rents videos to customers and submits reports to the management and cash departments daily. Draw the Context and Level-0 Data Flow Diagrams for this system. (4 marks)

Question 5

(a) A person wants to withdraw cash from an ATM machine. Construct a suitable decision table to represent this withdrawal process making the following assumptions: (3 marks)

(i) Correct user ID must be used.

(ii) Withdrawal amount must be less than or equal to the balance amount.

Continue...

(b) Explain how Data Modelling, Process Modelling and Logic Modeling are related to one another. (3 marks)

(c) Construct an E-R diagram with cardinalities for a car-insurance company whose customers own one or more cars each. Each car is associated with zero or more number of recorded accidents. Show appropriate attributes for each entity/relationship on the E-R diagram. (4 marks)

Question 6

(a) Design specifications for forms and reports involve three components. Give a brief description of these three components. (3 marks)

(b) What are the six major activities performed during the implementation phase of system development life cycle? (3 marks)

(c) Describe any FOUR factors that influence the system maintainability. (4 marks)

End of QP